Idaho Nonpoint Source Program

2003 Field Evaluation Progress Report

Idaho Department of Environmental Quality

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Summary

During the summer and fall of 2003, staff from the Department of Environmental Quality (DEQ) Technical Services Division evaluated fieldwork related to thirty-two nonpoint source (NPS) water quality enhancement contracts (Figure 1). These evaluations are detailed in twenty-eight individual reports (four of the projects include two contracts each) covering a variety of best management practices (BMPs) related to recognized NPS categories, including agriculture, hydrologic habitat modification, transportation, and urban storm water runoff.

All 2003 field evaluation reports, including photographs of all 32 contracted projects, can be accessed using the links in *Table 1*, page 11.

Four projects are highlighted in this year's annual progress report because they exemplify outstanding coordination, design, and implementation:

- Jim Ford Creek Watershed Enhancement Project
- Thomas Fork Stream Bank Protection Project
- Medicine Lodge Creek Total Maximum Daily Load (TMDL) Implementation Project
- Paradise Creek TMDL Implementation Project

Descriptions of the four highlighted projects can be found in *Outstanding Projects*, starting on page 15.

Introduction

DEQ currently oversees approximately 50 NPS regional projects in Idaho, with each project assigned a contract number. If projects are extended to several years, with additional tasks and funding, additional contract numbers may be assigned to a project area.

All projects are subject to field inspections by DEQ, with DEQ's Nonpoint Source Program manager having set a goal to evaluate the progress of at least half of all current projects annually, assuring that the projects are completed in a timely manner and achieving their overarching goal of cleaning up and preventing NPS water pollution. During the summer and fall of 2003, staff from the DEQ Technical Services Division exceeded that goal by inspecting 32 of 50 on-going NPS contracted projects (Table 1).

Figure 1: Locations of 2003 Nonpoint Source Projects

History of the Nonpoint Source Program

Congress established the national NPS program in 1987, when it amended the Clean Water Act with section 319, "Nonpoint Source Management Programs." Under section 319, states were given the federally-funded mandate to address NPS water pollution by 1) conducting statewide assessments of their waters, 2) developing NPS management programs to address those waters identified as impaired or threatened, and 3) implementing Environmental Protection Agency (EPA)-approved, federally-funded NPS management programs to clean up and prevent NPS pollution.

Initially, grants were awarded on a competitive basis to any state that wished to apply. Then, in 1995, EPA recognized that all states had developed maturity in effectively working to clean up and prevent NPS pollution and invited all 50 states to apply for grants on a non-competitive basis. This new approach allowed federal funds to be more widely distributed among the states, while still requiring that all projects meet certain strict standards. At that point, the EPA and the states formed the *Association of State and Interstate Water Pollution Control Administrators* (ASIWPCA), which led to the current NPS framework.

In Idaho, NPS funding has resulted in over 100 contracts for on-ground projects designed to clean up and prevent NPS pollution. Of the 100 projects undertaken since the inception of the NPS program, Idaho currently oversees approximately 50 on-going projects. Each project is described in detail through formal contracts established between DEQ and a variety of permittees, including federal and state agencies, and nonprofit organizations.

Field Evaluation Process

DEQ used its list of NPS field project requirements to generate a detailed form for staff to use for field evaluations. For all evaluations, DEQ staff carefully reviewed the project's sub-grant agreement and made notes prior to going to the field. The DEQ project evaluator routinely contacted the project manager and arranged to accompany the project manager, DEQ regional staff, and any other stakeholders to the field. In all cases, the detailed evaluation form was used as a guide to assure that all NPS requirements were being met in the field.

Results of the 2003 Field Evaluations

DEQ staff traveled to 25 geographical areas of Idaho and evaluated 32 contracted projects during the summer and fall of 2003 (Table 1).

Of the 32 contracts evaluated, 28 appear to be fully meeting their contractual obligations by demonstrating substantial progress toward completion of their designated tasks to

reduce, eliminate, or prevent NPS water pollution. Three contracts appear to be proceeding unsatisfactorily, and work on one contract has been delayed until next year.

Unsatisfactory Project Progress

Two of the projects where unsatisfactory work is occurring include storm water BMPs at the City of Blackfoot and storm water BMPs at the City of Pocatello.

During our evaluation of the Blackfoot projects (Contract Number S020) DEQ learned that the Blackfoot Tribe, who own adjacent land, has elected to not let the City of Blackfoot use their land at the outflow end of both retention ponds involved in this project. This denial of land use will cause the storm water capacity of one pond to be reduced considerably and will cause the other pond to not function as a flow-through facility as originally designed. No further 319 funds should be spent on either pond until this problem can be solved.

During our evaluation of the City of Pocatello's North City Park Wetland project, DEQ discovered that there seems to be a problem with the proposed location of the bioinfiltration/wetland facility. It appears that the area selected for the wetland and bioinfiltration basin will not be maintainable without the installation of a costly irrigation system. An irrigation system would be required because the bottom of the proposed wetland would be situated too far above the water table for the wetland to be self-sustainable. It is also unclear whether the conveyance pipeline and outlet that has already been installed will work properly in a storm event. After discussing the project with DEQ engineers and the city engineer, it is suggested that no additional 319 funds be spent on this project until these issues have been resolved.

Satisfactory Project Progress

The great majority of the projects evaluated in 2003 are proceeding satisfactorily. The project evaluations covered a variety of best management practices (BMPs) related to recognized NPS categories, including agriculture, hydrologic habitat modification, transportation, mining, and urban storm water runoff.

Projects evaluated include irrigation water cleanup, wetland creation, and settling ponds in south-central and southeast Idaho; Animal Feeding Operation (AFO) relocations, stream bank restoration, livestock exclusion, and restoration of an abandoned mine dump near Yellow Pine, in north-central Idaho. Finally, in the watershed above Winchester Reservoir, DEQ evaluated pollution prevention measures, including low-till and no-till farming techniques, and lake water cleanup techniques in Winchester Reservoir, including lake water aeration.

Table 1 lists all 32 of the NPS contracted projects that were evaluated in the field during the summer and fall of 2003. These 32 contracts occurred at 28 project sites around Idaho.

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Table 1: Active Nonpoint Source Projects Field Evaluated Summer/Fall 2003

Grant Year	Contract[a]	Project Name	HUC or SRC[b]	Tasks or BMPs Evaluated	DEQ Region
2000	Q609	Bear River Fencing and Riparian Enhancement	16010202	Stream bank stabilization, fencing, grazing plans, weed control.	Pocatello
2000, 2001	Q607 and S020	Blackfoot, City of, Engineered Wetland and Urban Runoff	17040206001834	Two storm water retention ponds.	Pocatello
1998,1999	Q529 and Q366	Coeur d' Alene Tribe Wetland Creation and Restoration/Lake Creek – Plummer	1701030423	Sediment control BMPs for dirt roads.	Coeur d' Alene
2003		Cedar Draw Coulee Wetland	17040212000914	A series of three serpentine shaped ponds that will be interconnected with riparian wetland areas.	Twin Falls
2003	S093	Edson Fichter Nature Area	17040208000017	Revetments, seeding along stream bank, restoration of 700 feet of meandering stream channel, installation of 300 feet of pipe to convey water to a settling pond, installation of a small settling pond.	Pocatello
1999	S029	H 17 Drain TMDL Implementation Plan	17040209000034	200 feet long, 50 feet wide, sediment basin installed at bottom end of six-mile long irrigation canal; captures sediment from return irrigation water prior to discharge to Goose Creek and Snake River.	Twin Falls
2002	S055	Hailey Big Wood River Improvement	17040219	Placed 1,300 feet of stream bank stabilization. Constructed four rock-drop structures. Removed highway maintenance material adjacent to river. Planted woody and grass vegetation along bank and filter strip. Removed illegal landfill, including asbestos. Installed half-acre settling pond/wetland used for normal river flow and storm water runoff.	Twin Falls
2001	S015	Jim Ford Creek Watershed Enhancement	17060306	Road rocking and culvert installation. Six miles of exclusion fencing. 9200 willow cuttings, 3300 lodgepole pine seedlings, 1100 dogwood seedlings, 2500 Hawthorne seedlings, 100 alders, 100 cottonwoods, and 200 spirea planted. One-quarter mile of stream rehabilitation and re-alignment completed.	Lewiston

Grant Year	Contract[a]	Project Name	HUC or SRC[b]	Tasks or BMPs Evaluated	DEQ Region
	S041	Kinsey Corral relocation Note: This project has been delayed and will be completed next year.	17040212001190	Visited current location of Kinsey corral and discussed the relocation and reclamation of the old site. Observed where 3,500 feet of exclusionary fencing will go to keep livestock out of McMullen Creek. Visited site where the new corral will be built.	Twin Falls
2002	S054	Lemhi Watershed TMDL Implementation	17060204000035	Fencing, diversion berms, pipe line, water troughs, well.	Twin Falls
2003	S079	Main Perrine Coulee Wetland	17040212000273	Future site for a concrete diversion structure, a large (8 acre) settling pond and several wetlands. Features will treat 80 to 90% of all the water coming through Main Perrine Coulee.	Twin Falls
2002	S051	Medicine Lodge Creek TMDL Implementation	17040215050100	Willow clumps, willow pole plantings. Toe rock rip-rap, vertical bundles of willows, V-notch weirs used for drop structures, grass, fencing.	Idaho Falls
2001	S039	North-central AFO Relocation		Relocation of numerous AFOs belonging to 27 operators over five conservation districts. BMPs include corral relocations, hardened crossings, fencing, culverts and water troughs.	Lewiston
1999	Q562	Paradise Creek (Urban) TMDL Implementation	17060108	Wetlands, stream channel restoration, extensive plantings, fencing, woody plant riparian buffers, wildlife habitat structures. Stream bank stabilization, noxious weed control, flood plain restoration.	Lewiston
2000	Q605	Paradise Creek (Rural) TMDL Implementation	17060108	Wetlands – 5 projects totaling 522,700 square feet within 11 wetlands, gully plugs, fencing – 16,000 feet, woody vegetation – 10,547 plants, herbaceous vegetation – 168,680 plants. Stream bank restoration – 18,750 feet, noxious weed control, storm water bioinfiltration ponds, vegetated buffer – 685,364 square feet. (Note: all figures are proposed amounts upon project completion.)	Lewiston
1997	Q297	Pocatello First Street Wetland	17040208	Three-acre combined wetland and retention/evaporation basin.	Pocatello
2001	S022	Pocatello North City Park Wetland	17040208	One small catchment basin constructed, conveyance pipeline and infiltration sump installed, large bioinfiltration wetland basin could be constructed in oxbow to Portneuf River	Pocatello

Grant Year	Contract[a]	Project Name	HUC or SRC[b]	Tasks or BMPs Evaluated	DEQ Region
1999	Q508	Raft River Riparian and Watershed Demonstration	17040210000126	Rock crossings, rock drop structures-20, stream bank stabilization revetments, 12 diversion structures, 12 weirs, 12 concrete irrigation return flow structures, plantings including willows and grass, grazing management.	Twin Falls
2001	S023	Rapid Creek Riparian Project	17040212000191	Water well and pump, corral modification, pipeline, water troughs, 1,500 feet of fencing, stream bank restoration, grass and woody plantings.	Pocatello
2001	S026	Rock Creek Restoration	17010304	Two storm water detention ponds, stream bank sloping and stabilization geo-matting, seeding, trees, shrubs, sprinkler system, installation of 5000 yards of topsoil, removal of old concrete from a two acre area, installation of two pedestrian bridges across Rock Creek.	Twin Falls
2001	S024	Santa Creek Stream Bank Restoration	17010304	Electric fencing, hard crossings, re-vegetation along stream bank including wild rose, willow, aspen, thin leaf alder, syringa, wild apple, white pine, ponderosa pine, Douglas fir, and larch.	Coeur d' Alene
1999, 2000	Q564 and S009	Scriver Creek Watershed Roads and Forested Lands	17050112	Sediment control BMPs for dirt roads including culverts, gravel road base, road sloping, ditches, two sediment collection/measuring boxes.	Boise
1996	Q444	Sheridan Creek Restoration	17040202	Nine large diversions completed, (one remaining to be completed), 14 miles of fencing, 10 rock check dams, six culverts. Numerous rock drop structures, 0.5 mile of riparian plantings along stream banks, one water well.	Idaho Falls
2003	Not yet assigned	Stibnite Mine Meadow Creek Restoration	17060208000385	Two sub-project areas include the Glory Hole project and Meadow Creek area. Glory Hole BMPs include relocation and stabilization of mine tailings, adjacent to Meadow Creek. Meadow Creek BMPs include construction of a large composting operation, application of compost to reclaimed mine waste piles, additional reclamation of mine waste piles, installation of stream bank plantings	Boise
2001, 2002	S016, and S053	Thomas Fork Stream Bank Protection	16010102	Numerous rock barbs, 13,267 feet of stream bank sloping and rip-rapping, 13,267 feet of stream bank plantings including grass and woody vegetation, 10,000 of fencing, drop fencing for variable flows, one 18 foot wide and 66 foot long bridge across Thomas Fork River, one manure separator, one wetland complex.	Pocatello
2000	Q606	Willow /Boulder Creeks BMP Implementation	17050123	Fencing, hardened crossings, trees and scrubs, stream bank restoration and stabilization, cattle exclusion, pest management.	Boise
2002	S043	Winchester Lake In-Lake Phosphorous Reduction	17060306	Five electric powered aerators installed on Winchester Lake, one fish cleaning station.	Lewiston

Grant Year	Contract[a]	Project Name	HUC or SRC[b]	Tasks or BMPs Evaluated	DEQ Region
1999	S011	Winchester Lake Upper Lapwai Creek Watersheds	17060306	Nine fish friendly culverts, filter strips between cultivated fields and dirt roads, no-till farming techniques applied to 30% of all cultivated fields, reduced till farming techniques applied to 60% of all cultivated fields, grass planted in intermittent waterways.	Lewiston

a More than one contract number for a project indicates that additional funding was later granted for additional tasks.

b Eight digit numbers indicate Hydrologic Unit code (HUC); 14 digit numbers indicate Stream Reach Code (SRC)

Outstanding Projects for 2003

Four projects in this year's annual progress report exemplify outstanding coordination, design, and implementation:

- Jim Ford Creek Watershed Enhancement Project
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- Paradise Creek TMDL Implementation Project

Summaries for each of these outstanding projects are presented in the following sections.